

TRAP-DOOR SPIDERS OF THE "CHEVERT" EXPEDITION.

BY

[the late] W. J. RAINBOW, F.E.S., Entomologist, Australian Museum.

(Figs. 1-8.)

In 1875 the late Sir William John (then Mr.) Macleay fitted out and conducted a scientific expedition for "a few months' cruise among the Islands of New Guinea and Torres Straits," for which purpose he chartered the barque "Chevert." As a result of this expedition, which occupied about six months, a large amount of material was collected, and a number of papers dealing with it were published in the two first volumes of "The Proceedings of the Linnean Society of New South Wales." Of the material thus collected, the Araneidæ were entrusted to the late Mr. H. H. Burton Bradley, and the greater part of it was worked out by him, the results being recorded in three short papers¹. The total number of species enumerated was forty-three, of which fourteen were described as new. Since the demise of the author referred to, Mrs. Bradley, his widow, has presented to the Trustees of the Museum a collection of Australian and Papuan Araneidæ. The last-named series is especially interesting, since it proves to be of the Family Aviculariæ, and is labelled: "Papua: Chevert Expedition." No Terretelariæ were included by Mr. Bradley in his papers, owing, doubtless, to the poverty of literature upon the subject at that time, and to which, small though it was, access was naturally difficult if not impossible.

The majority of the species worked by Mr. Bradley were of the Family Argiopidæ; in addition to these there were a few Theridiidæ, one of the Pholeidæ, one of the Zodaridæ, and a couple of the Clubionidæ.

The Terretelarians, of which the present paper deals, includes some interesting forms. The genera represented are *Missulena*, Walck., one species; *Arbanitis*, L. Koch, two species; *Ischnocolus*, Auss., one species; *Idiortis*, L. Koch, one species; *Hadronyche*, L. Koch, one species; and *Anepsiada*, Rainb. and Pull., one species. Also, included in this collection there are a couple of mature specimens, and three half-grown examples of *Heathale*, Auss. If there be no mistake about the locality label, then the occurrence of this genus in Papua is particularly interesting, since only two species of the genus have been recorded up to the present, and both of these are from New Zealand². For further comments in respect of the genus under discussion see conclusion of this paper.

The student will note that in the descriptions given below, the falcæ are not included in measurements.

¹ Bradley—The Araneides of the "Chevert" Expedition, Part 1 (*Proc. Linn. Soc., N.S.W.*, i., 1877, p. 137); On Some New Forms of Arachnidæ (*op. cit.*, p. 220, pl. ii.); and The Araneides of the "Chevert" Expedition, Part 2 (*op. cit.*, ii., 1878, p. 115).

² Hogg—*Proc. Zool. Soc., Lond.*, 1901, p. 276.

Family AVICULARIDÆ.

Sub-family ACTINOPODINÆ.

Genus *Missulena*, Walck.*MISSULENA OCCATORIA*, Walck.

Missulena occatoria, Walck., Tab. des Aran., 1805, p. 8, pl. ii., figs. 11-14.
Id., Ins. des Apt., 1837, p. 252³.

Obs.—This species has been recorded from many parts of Australia, particularly the Eastern, Southern and Western areas. More recently, however, I have seen examples from the far North, so that considering the former land connection of Australia with Papua, the above record is not remarkable for so common and widely distributed a species.

Hab.—Papua.

Sub-family CTENIZINÆ.

Genus *Arbanitis*, L. Koch.*ARBANITIS VILLOsus*, *sp. nov.*

(Figs. 1-3.)

♂ Cephalothorax, 9.5 mm. long, 7.5 mm. broad; abdomen, 7.5 mm. long, 5 mm. broad.

Cephalothorax.—Obovate, mahogany brown, clothed with golden-yellow hairs. *Pars cephalica* arched, moderately high, segmental groove broad, deep, sides not compressed; *ocular area* broader than long, raised, arched, fringed in front; *clypeus* yellow, narrow, truncated. *Pars thoracica* broad, arched, radial grooves broad, moderately deep; *thoracic fovea* deep, straight; *marginal band* broad, fringed with long hairs. *Eyes*.—Distributed over two rows of four each; front row strongly procurved; rear row procurved in front, recurved behind; anterior laterals elliptical, poised on black rings, and separated from each other by a space equal to that of three times their own individual diameter; rear medians round, as large as their anterior lateral neighbours, separated from each other by a space equal to that of one-half their own individual diameter, and each again from its lateral neighbour by rather more than that space; rear lateral eyes rather smaller than the anteriors, from which they are separated by about once their own individual diameter, elliptical, poised obliquely, and mounted on black rings; rear medians small, elliptical, each just touching the ring of its outer neighbour; they are also very close to the anterior medians, each being removed therefrom by a space scarcely equal to that of its own diameter (Fig. 1).



Fig. 1.

³ For fuller synonymy of species recorded in this paper, see my Census of Australian Araneidae (*Rec. Aust. Mus.*, ix., 2, 1911, pp. 108-112).

Legs.—Long, concolorous with cephalothorax, densely clothed with long golden-yellow hairs but displaying naked areas: each tibia and metatarsus bespined; metatarsi and tarsi i. and ii. scopulated; tarsi iii. and iv. also scopulated; tibia i. furnished with an apophysis: relative lengths: 1-4, 2, 3.

Palpi.—Moderately long, concolorous with legs, and similar to them in clothing: tibia inflated, and furnished with an apophysis: tarsal joint small, and armed with strong spines: bulb shining, bilobed, pyriform, slightly twisted, style grooved, short (Fig. 2). *Falces.*—Moderately strong, concolorous with cephalothorax, clothed with long, coarse golden-yellow hairs but displaying naked areas: inner angle of the furrow of each falx armed with a row of six strong teeth, and the outer with several small ones; beard red, fang long, well curved, shining, reddish-brown.

Maxillæ.—Arched, reddish-brown, hairy, furnished with a few small scattered spines: heel well rounded, inner angle of the apex of each falx terminating in an obtuse point; beard red.

Labium.—Concolorous, free, submerged, broader than long, arched, hairy, a few spines near apex.

Sternum.—Concolorous also, hairy, somewhat pyriform, arched, longer than broad, and terminating obtusely between fourth coxæ; *sigilla* small, marginal.

Abdomen.—Obovate, slightly overhanging base of cephalothorax, arched, chocolate-brown, densely clothed with long yellowish hairs. *Spinnerets.*—Brown, hairy: superior pair stout, first joint longest, and the third shortest and dome-shaped; inferior spinners short, cylindrical, close together, and touching each other.

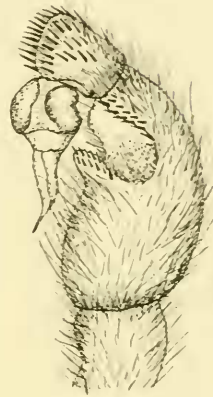


Fig. 2.

♀ Cephalothorax, 11.6 mm. long, 8.6 mm. broad: abdomen, 12.2 mm. long, 11.2 mm. broad.

Cephalothorax.—Obovate, chocolate-brown, uneven, clothed with long golden-yellow hairs. *Pars cephalica* ascending, arched, somewhat compressed, sides declivous, thoracic groove distinct; *ocular area* black, broader than long, raised, arched, fringed in front with a few stiff bristles; *clypeus* transversely wrinkled, deep, sloping forward, hyaline, tinged with reddish-brown, indented at middle. *Pars thoracica* broad, retreating, gently arched, radial grooves and depressions profound; *thoracic fovea* deep, slightly recurved; *marginal band* broad, yellowish, hairy. *Eyes.*—Distributed over two rows of four each; front row strongly procurved, rear row procurved in front and recurved behind; front lateral eyes

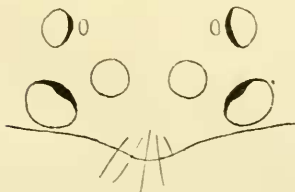


Fig. 3.

largest of the group, somewhat elliptical, poised obliquely, mounted on black rings, and separated from each other by a space equal to that of three times their own individual diameter; anterior medians round, and separated from each other by a space equal to fully once their own individual diameter, and each again from its anterior lateral neighbour by less than that space; posterior

lateral eyes nearly round and equal to anterior medians in size; lateral intermediates minute, elliptical, and each slightly removed from its lateral neighbour (Fig. 3). *Legs*.—Concolorous with cephalothorax, clothed with long golden-brown hairs and black bristles, but displaying naked areas: each leg armed on inner side with strong spines; meta-tarsi and tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Strong, similar in colour, clothing and armature to legs i. and ii.; tarsi scopulated. *Falces*.—Chocolate-brown, projected well forward, clothed with coarse hairs and bristles, but displaying naked areas: *rastellum* consists of several transverse rows of strong teeth; inner angle of the furrow of each falx armed with a row of eight strong teeth, and the outer with nine small ones; *fang* long, dark brown, nearly black. *Maxillæ*.—Reddish-brown, moderately arched, densely clothed with long hairs; heel well rounded; no spines present. *Labium*.—Concolorous, longer than broad, arched; submerged; no spines. *Sternum*.—Yellowish, pyriform, terminating obtusely between fourth coxæ, densely clothed with long hairs; *sigilla* marginal. *Abdomen*.—Obovate, chocolate-brown, arched, densely hairy. *Spinnerets*.—Stout, yellow, hairy; first joint of superior pair longest, the third shortest, and dome-shaped; inferior pair very short and close together.

Obs.—One male and several females. In alcohol the abdomen of some of the latter show faint indications of a colour pattern in the shape of thin broken transverse lines of yellow.

Hab.—Papua.

ARBANITIS GRADLEYI, *sp. nov.*

(Figs. 4-6).

♂ Cephalothorax, 8 mm. long, 6 mm. broad; abdomen, 8 mm. long, 6.3 mm. broad.

Cephalothorax. — Obovate, yellow-brown, uneven, clothed with yellowish hairs. *Pars cephalica* gently ascending, arched, moderately high, sides compressed, segmental groove distinct; *ocular area* broader than long, dark brown, raised, fringed in front with a few stiff bristles; *clypeus* broad, yellowish, truncated, transversely wrinkled. *Pars thoracica* broad, arched, radial grooves broad, deep; *thoracic fovea* deep, straight; *marginal band* broad, undulated, fringed with long hairs. *Eyes*.—Distributed over two rows of four each; front row procurved, the rear straight in front and recurved behind; anterior laterals elliptical, poised obliquely, mounted on black rings, and separated from each other by a space equal to twice their own individual diameter; anterior medians round, separated from each other by a space equal to one-half their own individual diameter, and each again from its lateral neighbour by the same space; posterior laterals smaller than the front medians, elliptical, poised somewhat obliquely, and separated from the front laterals by a space equal to rather more than once their own individual diameter; rear medians small,



Fig. 4.

almost round, each just touching its lateral neighbour (Fig. 4). *Legs*.—Long, concolorous with cephalothorax, hairy but displaying naked areas, tibiae and metatarsi bespined; tibia i. furnished with an apophysis; metatarsi and tarsi i. and ii. scopulated; tarsi iii. and iv. also scopulated; relative lengths: 4-1, 2, 3.

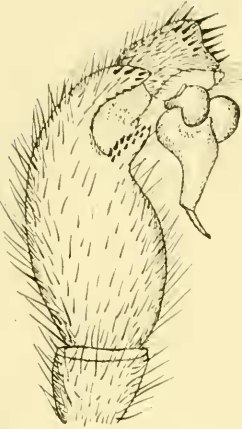


Fig. 5.

Palpi.—Moderately long, concolorous with cephalothorax, hairy; tibia inflated and furnished with a spined apophysis; tarsi small, bespined; bulb shining, bilobed, style slightly twisted, grooved, and moderately long (Fig. 5). *Palpes*.—Concolorous with cephalothorax, projected well forward, moderately strong, hairy, but displaying naked areas; inner angle of the furrow of each palpus armed with a row of six strong teeth, and the outer with a row of nine very small teeth, of which latter the three nearest the fang are the largest and widest apart; *rastellum* consists of two transverse rows of teeth; fang long, well curved. *Maxillae*.—Reddish-yellow, arched, hairy, apex of inner angle terminating in an obtuse point; heel well rounded; no spines present. *Labium*.—Concolorous, short, broad,

arched, free, hairy, submerged; no spines present. *Sternum*.—Concolorous also, pyriform, moderately arched, hairy, and terminating obtusely between fourth coxae; *sigilla* small, marginal. *Abdomen*.—Ovate, arched, slightly overhanging base of cephalothorax, hairy; superior surface chocolate-brown, ornamented in front with three large yellow spots, which latter are close together and nearly confluent; below these there is a series of transverse, slightly curved, broken yellow markings, of which the front pair are the largest; inferior surface yellow (Fig. 6). *Spinnerets*.—Yellow, hairy; first joint of superior pair longest, and the third shortest and dome-shaped; inferior spinnerets cylindrical, and once their own individual transverse diameter apart.



Fig. 6.

Obs.—Two mature males and one half-grown female. Judging by the latter the sexes are much alike both in colour and abdominal ornamentation. The sternum appears to be relatively broader than in the male, and the inferior spinnerets are quite close together instead of being once their own individual transverse diameter apart.

Hab.—Papua.

Sub-family AVICULARINÆ.

Genus *Ischnocolus*, *Auss.*

ISCHNOCOLUS LUCIBRANS, *L. Koch.*

Ischnocolus lucibrans, *L. Koch*, *Die Arach. des Austr.*, i., 1874, p. 487, pl. xxxvii., figs. 4, 4a; *Hogg*, *Proc. Zool. Soc., Lond.*, 1901, p. 244.

Obs.—One specimen of what appears to be the above, and which agrees very well with L. Koch's description and figure, is included among the "Chevert" material, but it is, as suggested by Hogg (*supra*), in all probability a young example of some other genus. The specimen under discussion has its tarsal scopulae divided by a fine line of setae, but Mr. R. J. Pocock has pointed out⁴ that among those species which in the adult state have an integral scopula, the latter is always more or less divided in the earlier stages. As there is only one example in this collection, and that one damaged, I prefer to follow the example of my friend, Mr. H. R. Hogg, and to let the matter remain as it stands for the present. Koch's type came from Port Mackay, North Queensland.

Hab.—Papua.

Sub-family BARYCHELINÆ.

Genus *Idioctis*, L. Koch.

IDIOCTIS PAPUENSIS, *sp. nov.*

(Fig. 7.)

♀ Cephalothorax, 4.6 mm. long, 3.2 mm. broad; abdomen, 5.6 mm. long, 3.2 mm. broad.

Cephalothorax.—Obovate, elongate, yellow. *Pars cephalica* ascending, arched, high, sides compressed, segmental groove distinct; *ocular area* broader than long; *clypeus* narrow. *Pars thoracica* arched, uneven, radial grooves rather deep; *thoracic fovea* straight; *marginal band* fringed with rather long hairs. *Eyes*.—Distributed over two rows of four each; front row touching edge of clypeus, well procurved; rear row recurved behind; front laterals largest of the group, elliptical, poised obliquely, and three times their own individual diameter apart; anterior intermediates round, separated from each other by a space equal to that of one-half their own individual diameter, and each again from its lateral neighbour by a similar space; rear laterals rather smaller than the anterior intermediates, elliptical, obliquely poised, and each separated from its anterior lateral neighbour by a space equal to one-and-a-half its own diameter; rear intermediates minute, each just touching the outer ring of its lateral neighbour (Fig. 7). *Legs*.—Concolorous with cephalothorax, moderately long, rather strong, hairy but displaying naked areas, each armed with rather long though not strong spines; tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, strong, similar in colour, clothing and armature to legs; tarsi scopulated. *Falces*.—Concolorous with cephalothorax, projecting, arched, hairy, but displaying naked areas; inner ridge of the furrow of each falx armed with a row of six teeth; a light *castellum* present.



Fig. 7.

⁴ Pocock—Ann. Mag. Nat. Hist., (6). xvi., 1895, pp. 225-230.

Maxilla.—Pale yellow, rather short, broad, arched, hairy, apex of inner angle obtusely pointed; no spines present. *Labium*.—Concolorous, short, broader than long, arched, almost triangular, widest at base, moderately hairy, apex fringed with dark bristles; no spines present. *Sternum*.—Concolorous, longer than broad, arched, almost parallel-sided, moderately clothed with coarse hairs; *sigilla* small, marginal. *Abdomen*.—Obovate, hairy, arched, just overhanging base of cephalothorax; superior surface yellow-brown, ornamented with five short, narrow, curved, transverse yellow bars, the first three of which are broken at the middle; sides and inferior surface pale yellow. *Spinnerets*.—Yellow, hairy, short; superior pair stout, tapering, first joint longer than the second and third combined, terminal joint shortest; inferior pair very short, cylindrical, and separated from each other by a space equal to that of once their own individual diameter.

Hab.—Papua.

Sub-family DIPLURINÆ.

Genus Hadronyche, L. Koch.

HADRONYCHE HIRSUATA, *sp. nov.*

(Fig. 8.)

♀ Cephalothorax, 12 mm. long, 11.2 mm. broad; abdomen, 12.2 mm. long, 9.9 mm. broad.

Cephalothorax.—Obovate, mahogany-brown, moderately hairy. *Pars cephalica* ascending, high (though not so much so as in *Missulena*, Walck.), shining, well arched, smooth, segmental groove deep; *ocular area* broader than long, not raised; *clypeus* narrow, truncated. *Pars thoracica* uneven, arched, radial grooves deep; *thoracic fovea* deep, procurved; *marginal band* broad, yellow. *Eyes*.—Distributed over two rows of four each; anterior row straight in front, slightly recurved behind; rear row also straight in front but recurved behind; anterior lateral eyes largest of the series, elliptical, and poised on black rings; front medians round, separated from each other by a space equal to once their own individual diameter, and each again from its lateral neighbour by about half that space; rear laterals elliptical, each separated from its anterior lateral neighbour by a space equal to that of one-half the diameter of one of the front median eyes; rear intermediates round, each just touching the ring of its outer neighbour; rear row slightly longer than the anterior (Fig. 8). *Legs*.—Strong, not long, concolorous with cephalothorax, densely hairy, but displaying naked areas; each metatarsus armed with a double row of spines; there are also three or four strong spines on tibiae i. and ii.; scopula and spines on all four tarsi; relative lengths: 1, 4, 2, 3. *Palpi*.—Short, stout, concolorous with legs, densely hairy, tibiae and tarsi armed with numerous



Fig. 8.

spines. *Falces*.—Powerful, projecting, thickly clothed with long hairs, but displaying naked areas; inner angle of the furrow of each falx armed with fifteen strong teeth, and the outer with ten; between these two rows there is a dense cluster of very small teeth; fang well curved, long, almost black. *Maxillæ*.—Moderately long, reddish-brown, well arched, clothed with long hairs, apex of inner angle terminating in an obtuse point, inner area densely spined. *Labium*.—Concolorous, free, longer than broad, well arched, moderately clothed with long hairs, apex densely spined. *Sternum*.—Concolorous also, somewhat pyriform, deeply excavated in front, arched, thickly clothed with long hairs; *sigilla* marginal, anterior and median pairs small, posterior pair rather large. *Abdomen*.—Obovate, dark-brown, arched, slightly overhanging base of cephalothorax, densely hairy. *Spinæ*.—Yellow, short, stout, hairy; superior pair tapering, first joint longest, second shortest, the third coniform; inferior pair close together, cylindrical, apices truncated.

Obs.—The species described above is very distinct from that of *H. cerberæ*, L. Koch. In the female of the species quoted, the anterior row of eyes is recurved, instead of being straight, and the front medians are the largest of the series; in the male this row is straight, but the relative sizes are the same. The abdomen is round, as broad as long and only sparingly hairy, whilst in *H. hirsuta* (*suprà*) it is obovate and densely clothed with hairs. These points serve easily to differentiate the two species, but the student is directed to Koch's description and figures⁵.

Hab.—Papua.

Genus Anepsiada, Rainb. & Pull.

ANEPSIADA VENTRICOSA, Rainb. & Pull.

Anepsiada ventricosa, Rainb. and Pull., Rec. Aust. Mus., xii., 7, 1918, p. 167, pl. xxiv., fig. 120.

Obs.—This, the type species of the genus, was originally recorded from Cloncurry, Central Queensland. Though varying very slightly in size the two Papuan examples of the "Chevert" Expedition present no distinct differences from the Cloncurry example.

Hab.—Papua.

Genus Hexathele, Auss.

HEXATHELE HOCHSTETTERI, Auss.

Hexathele hochstetteri, Auss., Verh. zool.-bot. Ges. Wien, 1871, p. 171; L. Koch, Die Arach. des Austr., i., 1873, p. 459, pl. xxxv., fig. 7; Hogg, Proc. Zool. Soc., Lond., 1901, p. 276, fig. 41.

Obs.—If, as pointed out in my introductory remarks (p. 77, *ante*) the specimens of the above species were correctly labelled, then the occurrence

⁵ L. Koch—Die Arach. des Austr., i., 1873, p. 463, pl. xxxv., figs. 6, 6a, 6b, 6c.

of this species in Papua is interesting. At any rate it is here tentatively recorded, for it is quite possible the specimens may have accidentally found their way into the bottle of Papuan material. The specimens, of which two are mature and three immature, bear out L. Koch's description and figure, the abdominal colour pattern being equally as distinct and strongly marked in each example under review as in the picture. On the other hand Hogg (*supra*) in his description of specimens examined by him says:—"Abdomen dark grey-brown above, dark but rather yellowish below, no pattern discernible." From this it would appear that the species is variable.

Hab.—? Papua.